

Table B-4. **Survey of Industrial Research and Development—unit response rates-number and percentage of companies that responded to the survey and percentage of companies that performed R&D, by industry and type of survey form: 2000**

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Industry and form received	NAICS codes	Number of companies that received a questionnaire ¹	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
All industries.....	21–23, 31–33, 42, 44–81	24,844	21,066	84.8	15.6
Manufacturing.....	31–33	4,808	4,012	83.4	45.8
Food.....	311	131	113	86.3	62.0
Beverage and tobacco products.....	312	11	11	100.0	54.6
Textiles, apparel, and leather.....	313–16	244	192	78.7	40.1
Wood products.....	321	111	94	85.5	25.5
Paper, printing and support activities.....	322, 323	106	91	85.9	36.3
Petroleum and coal products.....	324	16	15	93.8	86.7
Chemicals.....	325	218	178	81.3	91.0
Basic chemicals.....	3251	62	55	88.7	94.6
Resin, synthetic rubber, fibers, and filament.....	3252	16	16	100.0	93.8
Pharmaceuticals and medicines.....	3254	51	40	76.9	100.0
Other chemicals.....	325 (minus 3251–52, 3254)	89	67	75.3	82.1
Plastics and rubber products.....	326	325	262	80.6	60.7
Nonmetallic mineral products.....	327	131	114	87.0	47.4
Primary metals.....	331	104	89	85.6	59.6
Fabricated metal products.....	332	337	297	88.1	53.9
Machinery.....	333	260	218	83.9	74.3
Computer and electronic products.....	334	529	414	78.3	79.5
Computers and peripheral equipment.....	3341	70	55	77.5	81.8
Communications equipment.....	3342	79	54	69.2	88.9
Semiconductor and other electronic components.....	3344	114	91	79.8	89.0
Navigational, measuring, electromedical, and control instruments.....	3345	159	131	82.4	90.8
Other computer and electronic products.....	334 (minus 3341–42, 3344–45)	107	83	77.6	43.4
Electrical equipment, appliances, and components.....	335	110	89	80.9	76.4
Transportation equipment.....	336	217	188	86.6	69.2
Motor vehicles, trailers, and parts.....	3361–63	137	119	86.9	68.9
Aerospace products and parts.....	3364	24	20	83.3	90.0
Other transportation equipment.....	336 (minus 3361–64)	56	49	87.5	61.2
Furniture and related products.....	337	180	168	88.4	41.1

See explanatory information and SOURCE at end of table.

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Industry and form received	NAICS codes	Number of companies that received a questionnaire ¹	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Miscellaneous manufacturing.....	339	338	281	83.1	63.0
Medical equipment and supplies.....	3391	147	121	82.3	76.9
Other miscellaneous manufacturing.....	339 (minus 3391)	191	160	83.8	52.5
Other manufacturing	31–33 (minus 311–16, 321–27, 331–37, 339)	28	11	61.1	0.0
Small manufacturing companies ²	Fewer than 50 employees	1,412	1,187	84.1	7.7
Nonmanufacturing.....	21–23, 42, 44–81	20,036	17,054	85.1	8.5
Mining, extraction, and support activities.....	21	186	161	86.6	21.1
Utilities.....	22	65	58	89.2	60.3
Construction.....	23	2,055	1,798	87.5	1.2
Trade.....	42, 44, 45	3,040	2,653	87.3	4.9
Transportation and warehousing.....	48, 49	550	468	85.1	3.9
Information.....	51	745	590	79.2	38.0
Publishing.....	511	450	360	80.0	49.2
Newspaper, periodical, book, and database.....	5111	177	158	89.3	7.6
Software.....	5112	273	202	74.0	81.7
Broadcasting and telecommunications.....	513	129	102	79.1	12.8
Radio and television broadcasting.....	5131	34	30	88.2	3.3
Telecommunications.....	5133	72	55	76.4	20.0
Other broadcasting and telecommunications.....	513 (minus 5131, 5133)	23	17	73.9	5.9
Other information.....	51 (minus 511, 513)	166	128	77.1	26.6
Finance, insurance, and real estate.....	52, 53	870	765	87.9	4.8
Professional, scientific, and technical services.....	54	3,055	2,559	83.8	32.0
Architectural, engineering, and related services.....	5413	920	805	87.5	17.3
Computer systems design and related services.....	5415	837	633	75.6	47.7
Scientific R&D services.....	5417	475	393	82.7	87.5
Other professional, scientific, and technical services.....	54 (minus 5413, 5415, 5417)	823	728	88.5	4.8
Management of companies and enterprises.....	55	160	136	85.0	10.3
Health care services.....	621–23	1,024	911	89.0	3.5
Other nonmanufacturing	56, 61, 624, 71, 72, 81	2,707	2,222	82.1	1.6
Small nonmanufacturing companies ²	Fewer than 15 employees	5,579	4,733	84.8	0.9

See explanatory information and SOURCE at end of table.

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Industry and form received	NAICS codes	Number of companies that received a questionnaire ¹	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
COMPANIES THAT RECEIVED FORM RD-1					
All industries.....	21–23, 31–33, 42, 44–81	1,727	1,401	81.1	97.0
Manufacturing.....	31–33	934	776	83.1	97.9
Food.....	311	36	29	80.6	96.6
Beverage and tobacco products.....	312	4	4	100.0	100.0
Textiles, apparel, and leather.....	313–16	13	13	100.0	92.3
Wood products.....	321	4	2	50.0	150.0
Paper, printing and support activities.....	322, 323	30	26	86.7	96.2
Petroleum and coal products.....	324	8	8	100.0	100.0
Chemicals.....	325	142	123	86.6	99.2
Basic chemicals.....	3251	46	41	89.1	97.6
Resin, synthetic rubber, fibers, and filament.....	3252	14	14	100.0	100.0
Pharmaceuticals and medicines.....	3254	44	36	81.8	100.0
Other chemicals.....	325 (minus 3251–52, 3254)	38	32	84.2	100.0
Plastics and rubber products.....	326	46	40	87.0	97.5
Nonmetallic mineral products.....	327	11	10	90.9	100.0
Primary metals.....	331	21	17	81.0	94.1
Fabricated metal products.....	332	34	29	85.3	100.0
Machinery.....	333	112	96	85.7	97.9
Computer and electronic products.....	334	283	223	78.8	98.2
Computers and peripheral equipment.....	3341	36	29	80.6	96.6
Communications equipment.....	3342	58	39	67.2	97.4
Semiconductor and other electronic components.....	3344	90	72	80.0	97.2
Navigational, measuring, electromedical, and control instruments.....	3345	91	76	83.5	100.0
Other computer and electronic products.....	334 (minus 3341–42, 3344–45)	8	7	87.5	100.0
Electrical equipment, appliances, and components.....	335	51	40	78.4	97.5
Transportation equipment.....	336	76	66	86.8	98.5
Motor vehicles, trailers, and parts.....	3361–63	41	35	85.4	100.0
Aerospace products and parts.....	3364	19	16	84.2	100.0
Other transportation equipment.....	336 (minus 3361–64)	16	15	93.8	93.3
Furniture and related products.....	337	9	8	88.9	75.0

See explanatory information and SOURCE at end of table.

Table B-4. **Survey of Industrial Research and Development—unit response rates-number and percentage of companies that responded to the survey and percentage of companies that performed R&D, by industry and type of survey form: 2000**

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Industry and form received	NAICS codes	Number of companies that received a questionnaire ¹	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Miscellaneous manufacturing.....	339	52	41	78.9	100.0
Medical equipment and supplies.....	3391	38	30	79.0	100.0
Other miscellaneous manufacturing.....	339 (minus 3391)	14	11	78.6	100.0
Other manufacturing	31–33 (minus 311–16, 321–27, 331–37, 339)	0	0	0.0	0.0
Small manufacturing companies ²	Fewer than 50 employees	2	1	50.0	0.0
Nonmanufacturing.....	21–23, 42, 44–81	793	625	78.8	95.8
Mining, extraction, and support activities.....	21	14	13	92.9	100.0
Utilities.....	22	10	9	90.0	100.0
Construction.....	23	5	5	100.0	100.0
Trade.....	42, 44, 45	95	73	76.8	94.5
Transportation and warehousing.....	48, 49	4	4	100.0	75.0
Information.....	51	181	143	79.0	95.1
Publishing.....	511	148	116	78.4	98.3
Newspaper, periodical, book, and database.....	5111	5	4	80.0	100.0
Software.....	5112	143	112	78.3	98.2
Broadcasting and telecommunications.....	513	14	12	85.7	75.0
Radio and television broadcasting.....	5131	1	1	100.0	100.0
Telecommunications.....	5133	12	10	83.3	80.0
Other broadcasting and telecommunications.....	513 (minus 5131, 5133)	1	1	100.0	0.0
Other information.....	51 (minus 511, 513)	19	15	79.0	86.7
Finance, insurance, and real estate.....	52, 53	34	24	70.6	91.7
Professional, scientific, and technical services.....	54	422	333	78.9	97.3
Architectural, engineering, and related services.....	5413	64	46	71.9	95.7
Computer systems design and related services.....	5415	107	77	72.0	97.4
Scientific R&D services.....	5417	241	202	83.8	97.5
Other professional, scientific, and technical services.....	54 (minus 5413, 5415, 5417)	10	8	80.0	100.0
Management of companies and enterprises.....	55	2	2	100.0	100.0
Health care services.....	621–23	3	3	100.0	100.0
Other nonmanufacturing	56, 61, 624, 71, 72, 81	18	13	72.2	84.6
Small nonmanufacturing companies ²	Fewer than 15 employees	5	3	60.0	66.7

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COMPANIES THAT RECEIVED FORM RD-1A					
All industries.....	21–23, 31–33, 42, 44–81	23,117	19,665	85.1	9.8
Manufacturing.....	31–33	3,874	3,236	83.5	33.3
Food.....	311	95	84	88.4	50.0
Beverage and tobacco products.....	312	7	7	100.0	28.6
Textiles, apparel, and leather.....	313–16	231	179	77.5	36.3
Wood products.....	321	106	92	86.8	22.8
Paper, printing and support activities.....	322, 323	76	65	85.5	12.3
Petroleum and coal products.....	324	8	7	87.5	71.4
Chemicals.....	325	77	55	71.4	72.7
Basic chemicals.....	3251	16	14	87.5	85.7
Resin, synthetic rubber, fibers, and filament.....	3252	2	2	100.0	50.0
Pharmaceuticals and medicines.....	3254	8	4	50.0	100.0
Other chemicals.....	325 (minus 3251–52, 3254)	51	35	68.6	65.7
Plastics and rubber products.....	326	279	222	79.6	54.1
Nonmetallic mineral products.....	327	120	104	86.7	42.3
Primary metals.....	331	83	72	86.8	51.4
Fabricated metal products.....	332	303	268	88.5	48.9
Machinery.....	333	148	122	82.4	55.7
Computer and electronic products.....	334	246	191	77.6	57.6
Computers and peripheral equipment.....	3341	35	26	74.3	65.4
Communications equipment.....	3342	20	15	75.0	66.7
Semiconductor and other electronic components.....	3344	24	19	79.2	57.9
Navigational, measuring, electromedical, and control instruments.....	3345	68	55	80.9	78.2
Other computer and electronic products.....	334 (minus 3341–42, 3344–45)	99	76	76.8	38.2
Electrical equipment, appliances, and components.....	335	59	49	83.1	59.2
Transportation equipment.....	336	141	122	86.5	53.3
Motor vehicles, trailers, and parts.....	3361–63	96	84	87.5	56.0
Aerospace products and parts.....	3364	5	4	80.0	50.0
Other transportation equipment.....	336 (minus 3361–64)	40	34	85.0	47.1
Furniture and related products.....	337	181	160	88.4	39.4

See explanatory information and SOURCE at end of table.

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Industry and form received	NAICS codes	Number of companies that received a questionnaire ¹	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Miscellaneous manufacturing.....	339	286	240	83.9	56.7
Medical equipment and supplies.....	3391	109	91	83.5	69.2
Other miscellaneous manufacturing.....	339 (minus 3391)	177	149	84.2	49.0
Other manufacturing	31–33 (minus 311–16, 321–27, 331–37, 339)	18	11	61	0
Small manufacturing companies ²	Fewer than 50 employees	1,410	1,186	84.1	7.7
Nonmanufacturing.....	21–23, 42, 44–81	19,243	16,429	85.4	5.1
Mining, extraction, and support activities.....	21	172	148	86.1	14.2
Utilities.....	22	55	49	89.1	53.1
Construction.....	23	2,050	1,793	87.5	1.0
Trade.....	42, 44, 45	2,945	2,580	87.6	2.4
Transportation and warehousing.....	48, 49	546	464	85.0	3.2
Information.....	51	564	447	79.3	19.7
Publishing.....	511	302	244	80.8	25.8
Newspaper, periodical, book, and database.....	5111	172	154	89.5	5.2
Software.....	5112	130	90	69.2	61.1
Broadcasting and telecommunications.....	513	115	90	78.3	4.4
Radio and television broadcasting.....	5131	33	29	87.9	0.0
Telecommunications.....	5133	60	45	75.0	6.7
Other broadcasting and telecommunications.....	513 (minus 5131, 5133)	22	16	72.7	6.3
Other information.....	51 (minus 511, 513)	147	113	76.9	18.6
Finance, insurance, and real estate.....	52, 53	836	741	88.6	2.0
Professional, scientific, and technical services.....	54	2,633	2,226	84.5	22.3
Architectural, engineering, and related services.....	5413	856	759	88.7	12.5
Computer systems design and related services.....	5415	730	556	76.2	40.8
Scientific R&D services.....	5417	234	191	81.6	77.0
Other professional, scientific, and technical services.....	54 (minus 5413, 5415, 5417)	813	720	88.6	3.8
Management of companies and enterprises.....	55	158	134	84.8	9.0
Health care services.....	621–23	1,021	908	88.9	3.2
Other nonmanufacturing	56, 61, 624, 71, 72, 81	2,689	2,209	82.2	1.1
Small nonmanufacturing companies ²	Fewer than 15 employees	5,574	4,730	84.9	0.9

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¹ The "number of companies that received a questionnaire" is less than the number of "companies selected for the sample" in Table B-1 because some companies selected for the survey went out of business or were merged with other companies during the time between sample selection and survey mailout, that is, the sample frame was updated before actual mail-out took place. For more information, see "sample size" in the technical notes in this section.

² The frame from which the statistical sample was selected was divided into two partitions based on total company employment. In the manufacturing sector, companies with employment of 50 or more were included in the large company partition. In the nonmanufacturing sector, companies with employment of 15 or more were included in the large company partition. Companies in the respective sectors with employment below these values, but with at least 5 employees, were included in the small company partition. The purpose of partitioning the sample this way was to reduce the variability in industry estimates largely attributed to the random year-to-year selection of small companies by industry and the high sampling weights that sometimes were assigned to them. Because of this, detailed industry statistics were possible only from the large company partition; detailed industry statistics from the small company partition were not possible. Statistics from the small company partition are shown separately and are included in manufacturing, nonmanufacturing, and all industries totals. For more information, see "frame creation" and "sample selection" in the technical notes in this section.

KEY: (--) = Indicates data not collected.

NOTES: The calculation of the "percentage of companies that responded to the survey" was based on all companies that responded to the survey including those that reported they were out-of-scope, out-of-business, or had merged with another company. It excludes companies for which total R&D expenditure data were imputed. Mathematically, the percentage was calculated by dividing the number of companies that received a questionnaire (indicated in the previous column) into the number of companies that returned a response or questionnaire regardless of the data or information supplied in the response or on the questionnaire.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Industrial Research and Development: 2000